

WHAT IS CLAIMED IS:

1. A recording apparatus comprising:

dot formation means being divided into a plurality of groups, each of the groups for forming a dot in accordance with a predetermined dot formation condition assigned thereto, the dot formation condition related to monochrome recording or color recording;

drive means for driving the respective groups in the dot formation means in accordance with record data;

control means for expanding record information into an image in storage means and for transferring record data from the storage means to the drive means;

fixing signal output means for outputting a mode fixing signal determining whether the dot is formed or not, and for transmitting the mode fixing signal to the drive means associated with a group in the dot formation means in which whether the dot is formed or not is predetermined as the dot formation condition, instead of the record data;

mode fixing means for fixing the dot formation condition of the group in the dot formation means, to which the mode fixing signal is transmitted, as determined by the mode fixing signal.

2. The recording apparatus as set forth in claim 1, wherein the fixing signal output means outputs the mode fixing signal determining that the dot is not formed to the drive means associated with a group of the dot formation means which is not used for recording; and

5 wherein the mode fixing means fixes the dot formation condition of
6 the group so as not to form the dot.

1 3. The recording apparatus as set forth in claim 2, wherein the storage
2 means is provided with storage regions enough for a maximum number of
3 groups of the dot formation means which are used at the same time; and
4 wherein the control means reserves storage regions in the storage
5 means enough for groups used on a present recording.

1 4. The recording apparatus as set forth in claim 2, wherein the storage
2 means is provided with storage regions only enough for a maximum number of
3 groups of the dot formation means which are used at the same time.

1 5. The recording apparatus as set forth in claim 4, wherein the fixing
2 signal output means outputs the mode fixing signal determining that the dot is
3 formed to all the groups in the dot formation means when the predetermined
4 conditions of the respective groups are determined so as to form the dot.

1 6. The recording apparatus as set forth in claim 2, wherein when an
2 excess storage region occurs in the storage means in accordance with
3 unnecessary of the record data transmission due to the mode fixing signal
4 output, the control means utilizes the excess storage region for a serial
5 transmission of the record data.

1 7. The recording apparatus as set forth in claim 2, wherein when an
2 excess storage region occurs in the storage means in accordance with
3 unecessity of the record data transmission due to the mode fixing signal
4 output, the control means utilizes the excess storage region for another data
5 processing.

1 8. The recording apparatus as set forth in claim 2, wherein the divided
2 groups of the dot formation means includes a color group for forming a plurality
3 colors of dots, a first black group for forming a black dot on monochrome
4 recording and a second black group for forming a black dot on the
5 monochrome recording and the color recording; and

6 wherein the fixing signal output means outputs the mode fixing signal
7 to the first black group on the color recording, and outputs the mode fixing
8 signal to the color group on the monochrome recording.

1 9. The recording apparatus as set forth in claim 1, wherein the fixing
2 signal output means outputs the mode fixing signal determining that dot is
3 formed to all the groups in the dot formation means; and

4 wherein the mode fixing means fixes the respective dot formation
5 conditions of all the groups so as to form the dot.

1 10. The recording apparatus as set forth in claim 1, wherein the drive
2 signal is provided with a shift register for parallel-converting the record data
3 which is serial-transmitted; and

4 wherein the mode fixing means is provided on a signal transmission

5 path arranged between the shift register and the dot formation means.

1 11. The recording apparatus as set forth in claim 1, wherein the drive
2 signal is provided with a shift register for parallel-converting the record data
3 which is serial-transmitted; and

4 wherein the mode fixing means keeps data determined by the mode
5 fixing signal in the shift register.

1 12. A method of controlling data, comprising the steps of:

2 providing a recording apparatus comprising dot formation means
3 being divided into a plurality of groups, each of the groups for forming a dot in
4 accordance with a predetermined dot formation condition assigned thereto, the
5 dot formation condition related to monochrome recording or color recording;
6 drive means for driving the respective groups in the dot formation means in
7 accordance with record data; and control means for expanding record
8 information into an image in storage means and for transferring record data
9 from the storage means to the drive means;

10 judging whether there is a group of the dot formation means in which
11 whether the dot is formed or not is predetermined as the predetermined dot
12 formation condition, when the record data is expanded in the storage means
13 and is transmitted from the storage means to the drive means;

14 outputting a mode fixing signal determining whether the dot is formed
15 or not, and transmitting the mode fixing signal to the drive means associated
16 with the group in which whether the dot is formed or not is predetermined,
17 instead of the record data; and

18 fixing the dot formation condition of the group in the dot formation
19 means, to which the mode fixing signal is transmitted, as determined by the
20 mode fixing signal.

1 13. The data controlling method as set forth in claim 12, wherein the
2 mode fixing signal determining that the dot is not formed is output to the drive
3 means associated with a group of the dot formation means which is not used
4 for recording such that the dot formation condition of the group is fixed so as
5 not to form the dot.

1 14. The data controlling method as set forth in claim 12, further
2 comprising the step of reserving a storage region in the storage means
3 associated only with a group to which the mode fixing signal is not transmitted.